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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/655,403	09/05/2000	Seong Whan Kim	K-213	8206

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EXAMINER

D AGOSTA, STEPHEN M

ART UNIT	PAPER NUMBER
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2683

13

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/655,403

Applicant(s)

KIM ET AL.

Examiner

Stephen M. D'Agosta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7,9-20,22-25,31,33,34,36,49,54-57,59-63,65,66,71,74,75 and 77-80 is/are allowed.
- 6) ☒ Claim(s) 26-28,37,39-48 and 69 is/are rejected.
- 7) ☒ Claim(s) 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 26, 27-28, 37, 39, 40-48 and 69 have been considered but are moot in view of the new ground(s) of rejection.

1. The examiner acknowledges correction of claim 61.
2. The examiner notes that claims 47-48 and 55-56 are "single means claims" and need to be cancelled. Per USC 112, "a single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor". Failure to cancel these claims will result in a USC 112 rejection.

3. **Allowed Claims** 1-7, 9-20, 22-25, 31, 33-34, 36, 49, 54-57, 59-63, 65-66, 71, 74-75, and 77-80. **Rejected Claims** 26, 27-28, 37, 39, 40-48 and 69 rejected – these claims do not include the same detail as the allowed independent claims and continue to read on the prior art. **Objected claim:** 30.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Chander/Khalil in view of Rydbeck et al. US Patent 6,332,006 (hereafter Chander, Khalil, and Rydbeck).

As per **claim 26**, Chander teaches a method for transmitting/receiving short message broadcast services in a communication system (abstract teaches transmitting/receiving short messages, broadcast message/indicator and common forward channel, figure 5 and C2, L49-51) **but is silent on receiving a broadcast on the second common channel and wherein the first channel is a quick paging channel and the second is a paging or broadcast channel** (and monitoring of said second channel). **Rydbeck** teaches the transmission of a message (eg. SMS) via first and second control channels (abstract and claim 55) which would be monitored in order to determine if data is present on either channel. Rydbeck's use of multiple messages (eg. control, short, voice or data) is broadly interpreted as reading on the use of a broadcast message as well as transmitting on quick paging, paging or broadcast channels.

Khalil teaches broadcast messages for a mobile radio network (C3, L5-11 and figure 2) that uses a broadcast indicator (see claim 1 and claim 7). Said Broadcast message is transmitted via a BTS to other mobiles.

It would have been obvious to one skilled in the art at the time of the invention to modify Chander, such that a second channel is used, to provide information as to when a broadcast message will be sent.

Claims 28-29 and 69 rejected under 35 U.S.C. 103(a) as being unpatentable over Chander/Khalil/Rydbeck in view of Wiley #1.

As per **claim 28**, Chander **is silent on** means for monitoring a first common channel further to determine a value of a plurality of paging indicators and a configuration change indicator carried on the QPCH.

Chander teaches header information (eg. paging indicator) that provides indication to the mobile regarding various operational parameters (C4, L61-67 to C5, L1-20) which reads on "MS being in an idle state and monitoring Page Channel/FCC" BUT NOT A configuration change indicator.

Wiley#1 teaches a method for determining whether to wake up a mobile station. The mobile station includes first configuration parameters relating to a base station. The method includes the steps of receiving a configuration change indicator at the mobile station. The configuration change indicator is indicative that the first configuration parameters relating to the base station are different than second configuration parameters that currently relate to the base station. The method further includes waking up the mobile station to receive the second configuration parameters (Abstract).

It would have been obvious to one skilled in the art at the time of the invention to modify Chander, such that an idle mode mobile will monitor the paging channel or FCCC, to ensure that it will be informed if/when a broadcast message is to be sent.

As per **claim 29**, Chander **is silent on** the quick paging channel further includes a paging indicator (PI) and configuration change indicator (CCI) OR BI sequenced before the CCI on the QPCH.

Wiley#1 teaches both the paging indicator and configuration change indicator being transmitted on the QPCH channel (figure 4a, #445 and C9, L19-22) in a mobile system. Sequencing of the BI would not matter, it can be located anywhere in the QPCH channel/message. Monitoring of the QPCH is essential to Wiley's invention.

It would have been obvious to one skilled in the art at the time of the invention to modify Chander, such that the PI and CCI are used, to provide means for sending data via the Quick Paging Channel.

As per **claim 69**, Chander teaches a one paging message (and indicator)
[abstract] **but is silent on**

transmitting/receiving data on a QPCH channel wherein the data comprises:

At least one configuration change indicator

At least one broadcast indicator, Wherein for each slot of the QPCH channel said at least one BI is adjacent and between said at least one paging indicator and said at least one CCI

Willey#2 teaches various embodiments for QCPH (figures 1-3 and 5) and how it can be transmitted (Column 16, Claims 23-27) which reads on use of Khalil's BI in various places (eg. between the PI and CCI).

It would have been obvious to one skilled in the art at the time of the invention to modify Chander, such that for each slot of the QPCH said at least one BI is adjacent and between said at least one paging indicator and said at least on CCI, to provide a flexible means for transmitting the BI.

Claim 37, 39-40, 42-43, 45-48 rejected under 35 U.S.C. 103(a) as being unpatentable over Chander/Khalil in view of [Willey#1 US Patent 6,505,058 or Willey#2 US 6,138,034 or Heo or Butler US et al. US 6,111,865 or Brown Jr. US 6,363,242] (hereafter Willey#1 or Willey #2 or Butler or Brown).

As per **claim 37**, Chander teaches a method for transmitting/receiving short message broadcast services in a communication system (abstract teaches transmitting/receiving short messages, broadcast message/indicator and common forward channel, figure 5 and C2, L49-51) and header information (eg. paging indicator) that provides indication to the mobile regarding various operational parameters (C4, L61-67 to C5, L1-20) which reads on "MS being in an idle state and monitoring Page Channel/FCC" **but is silent on** a configuration change indicator and use of a Quick Page Channel (QPCH) and 100ms timeline and a broadcast message on a Paging Channel wherein the broadcast message contains a broadcast page.

Willey#1 teaches a method for determining whether to wake up a mobile station. The mobile station includes first configuration parameters relating to a base station. The

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method includes the steps of receiving a configuration change indicator at the mobile station. The configuration change indicator is indicative that the first configuration parameters relating to the base station are different than second configuration parameters that currently relate to the base station. The method further includes waking up the mobile station to receive the second configuration parameters (Abstract).

Willey#2 (6505058) teaches both the paging indicator and configuration change indicator being transmitted on the QPCH channel (figure 4a, #445 and C9, L19-22) in a mobile system AND a paging indicator assigned between about 100ms and 80ms before the paging channel slot (C16, claims 23-27) which reads on the claim. Willey (6505058) teaches both the paging indicator and configuration change indicator being transmitted on the QPCH channel (figure 4a, #445 and C9, L19-22) in a mobile system.

Broadcast messages are well known in the art and can be transmitted on a Paging channel as a broadcast message. Chander teaches a message delivered to a mobile via the paging channel (abstract) while Willey #1/#2 teach use of QPCH that can be used to page/send messages. Heo teaches the information about the segments is written in the broadcast address field of the broadcast page and the broadcast page is written in the reference slot which is the first of the slots to be transmitted on the paging channel. On the other hand, the mobile station monitors this reference slot and decides the broadcast message and its location to receive by the information of the broadcast address included in the reference slot. Therefore, the transmission of a large amount of broadcast message is possible regardless of the load of the paging channel and it is possible to effectively use the paging channel (C5, L22-33).

It would have been obvious to one skilled in the art at the time of the invention to modify Chander, such that a broadcast indicator is used along with a second control channel and configuration change indicator with broadcast page, to provide means to inform the mobile that a broadcast is to be sent (via several paths/channels) and that configuration changes may be required, to provide information to the mobile that a broadcast message is to be transmitted and that configuration changes may be required

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(if MS had been in idle state) and to provide means for simultaneous paging/transmitting.

As per **claim 39**, Chander is **silent on** setting the QPCH slot to "OFF" when not expecting a broadcast message in a paging channel slot.

One skilled who sets a field to a "ONE or ON" to notify the mobile that a broadcast message is expected would also set field to "ZERO or OFF" when not expecting a message. Further to this point is **Willey#1** (C15, L30-67).

Willey#1 teaches a method for determining whether to wake up a mobile station. The mobile station includes first configuration parameters relating to a base station. The method includes the steps of receiving a configuration change indicator at the mobile station. The configuration change indicator is indicative that the first configuration parameters relating to the base station are different than second configuration parameters that currently relate to the base station. The method further includes waking up the mobile station to receive the second configuration parameters (Abstract).

It would have been obvious to one skilled in the art at the time of the invention to modify Chander, such that the QPCH is OFF when no broadcast message is expected, to provide means for the mobile to know when a message is to be transmitted.

As per **claim 40**, Chander teaches the BTS sending data (abstract and figures).

As per **claims 42-43 and 45-46**, Chander is **silent on** the BI positioned two QPCH bit positions prior to last two bits in the first 40ms half of QPCH slot of the QPCH.

Willey#2 teaches various embodiments for a QPCH message (figures 1-3 and 5) and different timings as well (see claims 23-27 in column 16).

It would have been obvious to one skilled in the art at the time of the invention to modify Chander, such that the BI is positioned in two QPCH bit positions prior to the last two bits in the first 40ms half of a QPCH slot of the QPCH, to provide means for different embodiments for the placement of BI bits in the QPCH.

As per **claims 47-48**, Chander teaches an apparatus (ie. BTS or mobile) that provides an implementation of the above claimed limitations.

Claims 41 and 44 rejected under 35 U.S.C. 103(a) as being unpatentable over Chander/KhalilWilley in view of Gilhausen et al US Patent 6421,540 (hereafter Gilhausen).

As per **claims 41 and 44**, Chander is silent on an indicator rate of the QPCH is 4800bps.

Gilhausen teaches the quick paging channel data rate is typically 9,600 bps. However, it may operate at either rate 1 (9,600 bps), rate 1/2 (4,800 bps) or rate 1/4 (2,400 bps). The quick paging channel rate is typically specified on the paging channel (C6, L38-45).

It would have been obvious to one skilled in the art at the time of the invention to modify Chander, such that it indicates QPCH data rate, to provide means for the mobile to know the data rate of the downlink.

Allowable Subject Matter

Claim 30 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any


extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 703-306-5426. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen D'Agosta
5-12-04



WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Continuation of Disposition of Claims: Claims pending in the application are 1-7,9-20,22-26,28-31,33,34,36,37,39-49,54-57,59-63,65,66,69,71,74,75 and 77-80.